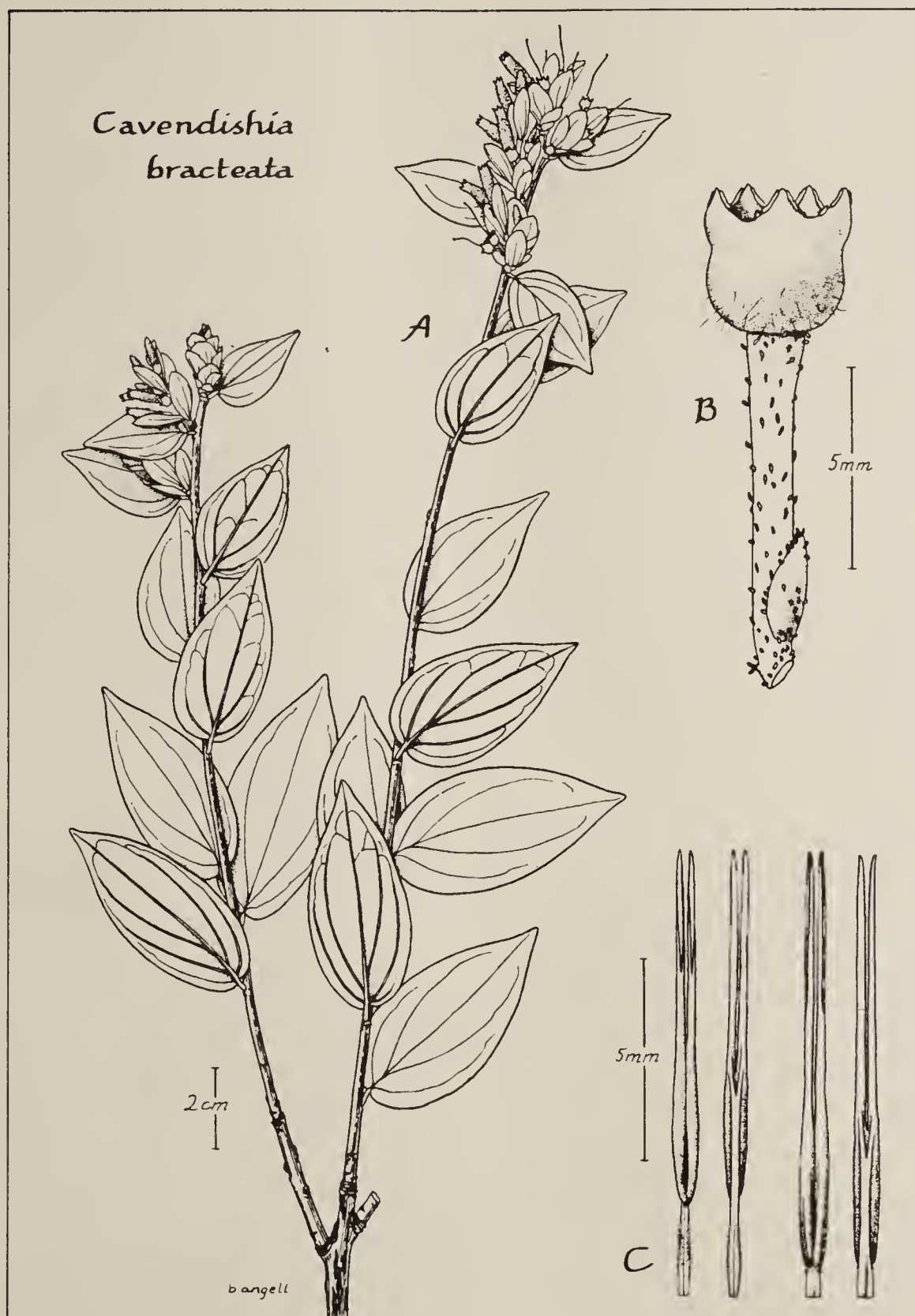


# *Horticulture Northwest*

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# Horticulture Northwest

Volume 13 Number 3  
Fall 1986

*Sallie D. Allen, Editor*

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Cover Illustration

Cavendishia Bracteata



## CAVENDISHIA — EXCITING ANDEAN ERICOID

Dr. Clement W. Hamilton, Center for Urban Horticulure

One of the most intriguing genera that occurs at higher elevations in the New World tropics is *Cavendishia*, a genus of about 100 species of shrubs in the Ericaceae. It first impressed me in Panama with its showy tubular flowers and large pinkish bracts subtending the flowers, both consistent with hummingbird pollination. To my knowledge, no member of the genus is of local horticultural use, and it is absent from Hortus Third, the New York Botanical Garden's Encyclopedia of Horticulture, and other standard plant materials resource books. Several species serve commonly as ornamentals in Columbia, however. Thus, *Cavendishia* appears to be one of many victims of neglect, due to historical and (horti-)cultural accident that has left us more familiar with plants from Western China than those from the Western Hemisphere.

Are any *Cavendishia* species candidates for horticultural use locally? First, we must know where, geographically, to look. Climatological comparison suggests that, in the New World tropics, we should look to the Andes at elevations of 3,000 meters and up, where minimum temperatures are comparable to those in the Pacific Northwest. Our quest is then made much easier (and extremely compelling!) by a thorough taxonomic monograph<sup>1</sup> of the genus prepared in 1983 by James Luteyn of the New York Botanical Garden. Which of the 100 species, then, occur in regions that suggest they would be hardy in our area?

Eighteen species occur at sufficiently high elevations. Many of those barely reach 3,000 meters, however, and some are of such restricted range that finding live material would be difficult and might not be in the best interest of the species (indeed, Luteyn reports that "local usage as floral 'bouquets' is clearly endangering the existence of several narrow endemics"). I have chosen, from the eighteen, five taxa as good bets for having landscape horticultural potential.

*Cavendishia bracteata* is the most variable species in the genus and occurs from tropical Mexico south to Bolivia mainly at elevations of 1,000 to 3,200 meters, reaching over 4,000 meters in Bolivia. Like many *Cavendishia* species, *C. bracteata* is a shrub, 1 to 4 meters tall, sometimes epiphytic. The flowers and their associated bracts are particularly striking (see cover illustration). The bracts themselves are about an inch long and are pink to dark red in color. The typical tubular corolla is bright red with white or greenish yellow tips. Individuals native to the higher elevations, subject to lower minimum temperatures, should certainly be examined for hardiness here.

*Cavendishia nitida* occurs only in Colombia, in the eastern and central cordilleras of the Andes at 2,000-3,500 meter elevation in misty areas. Its flower bracts are red and measure over an inch, while the corolla tube is red on its lower three-fourths and white on its distal quarter. In addition the fruit is edible and is reportedly sold in Bogota markets.

<sup>1</sup> Luteyn, J.L. 1983. Flora Neotropica Monograph number 35: Ericaceae - Part I. *Cavendishia*. New York Botanical Garden, New York, 290 pp.

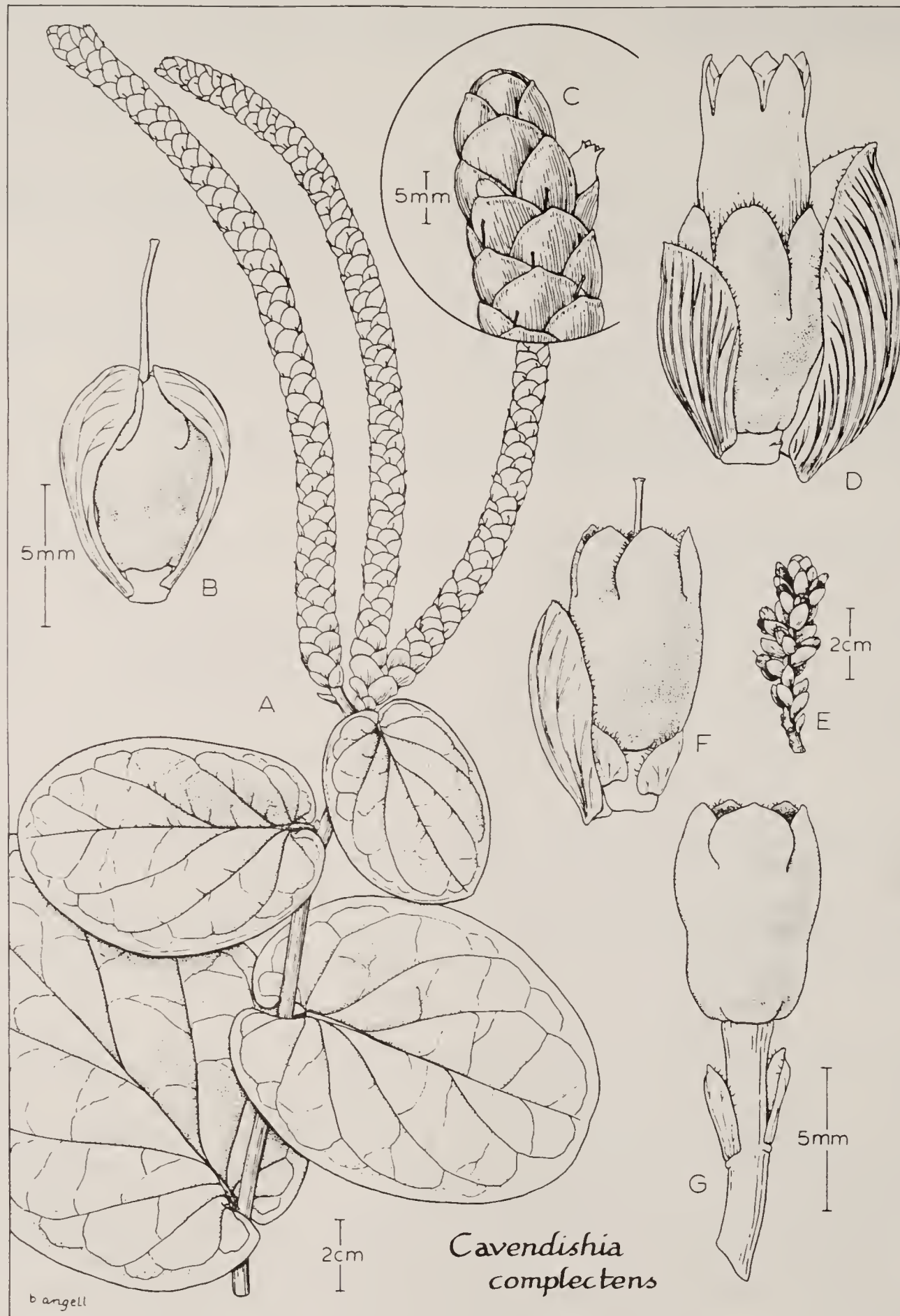


FIGURE 1. *Cavendishia complectens* (three infraspecific taxa represented). A, habit. B, calyx and bracteoles after anthesis. C, inflorescence detail. D, flower. E, inflorescence. F, flower with corolla removed. G, flower with corolla removed. Reprinted by permission.



Another likely species from the central cordillera of Colombia is 59  
*Cavendishia macrocephala*, which has been collected as high as 3,200 meters.  
Its leaves are substantial, reaching eight inches in length. Large red floral  
bracts contrast with a white to rose inch-long corolla.

The Andes of Peru and Bolivia also are home to several species of  
*Cavendishia*, among them *C. martii* and *C. punctata*. Both species have reddish  
green floral bracts and yellow-green corollas, not as spectacular as the first  
three species. *Cavendishia martii* occurs in Peru and Bolivia and reaches  
3,000 meters near La Paz. *Cavendishia punctata* is endemic to Peru and reaches  
3,700 meter elevation.

Many other species, such as the striking *Cavendishia complectens*  
(Figure 1), would be ideal in the greenhouse. For either outdoor-hardy or  
greenhouse plants, the next step is to pursue the targeted species and  
geographic areas. This involves corresponding with local botanists and  
horticulturists, scanning seed exchange indices, and keeping an informed  
eye out for the unusual. The road toward appreciation of the (hardy)  
floristic richness of the American Tropics promises to be long and  
rewarding.



COVER DRAWING. *Cavendishia bracteata*. A, habit. B, calyx, pedicel, and  
bracteole. C, stamens. Reprinted by permission.

#### FROM THE EDITOR'S FILE

Correspondence like yours is always welcome -- I am old and ill and have  
abundant time to answer.

There are two sets of rules of nomenclature, which you can probably  
consult at the University of Washington Botany Department.

One pamphlet is the International Code of Botanical Nomenclature. This  
concerns how plants shall be named, insofar as they deserve taxonomic  
standing. A Latin diagnosis is required so that anyone can find out what the  
plant's diagnostic features are, whatever their own language.

The second is a corresponding code for naming cultivate plants. This  
does not require Latin, but does call for a "type", which may be a published  
illustration.

---

Some plant species are constant in their characters and others, like your  
*Loiselouria*, highly variable. Some botanists like to give every variation an  
infra-specific name (subspecies, variety, forma), but if this were done  
throughout the plant kingdom, the number of names would be overwhelming, and I  
do not favor it. In listing phloxes, I merely mentioned such variants, giving  
them English descriptions -- like white form instead of forma alba.

Since in ornamental horticulture, the variations like a white versus pink  
form may be important, the code provides for cultivar names, usually written  
and printed in ordinary letters, but capitalized and surrounded by single  
quotes.

Dr. Edgar T. Wherry  
October 12, 1973



## 60 THE PLEASURES AND PERILS OF PLANT COLLECTING

Irving W. Knobloch\*, Ph.D., East Lansing, Michigan

Why do people collect plants? This really is a multi-faceted question, but one which clearly demands an answer. Many collect for their personal enjoyment - to add a novelty to their garden or to their herbarium. Then there are commercial collectors who gather wild plants for their nurseries. Mature or budding botanists gather plants for a dissertation or a monograph on some particular group, such as a genus or even a family, if not too large. Lastly, there are governmental collectors who search the world for plants with desirable genes, such as those having drought, heat, or pest resistance.

It may surprise you that people engaged in collecting activities run into the many thousands over the last three hundred years. One list which came to my attention contained the names of over 6,000 plant collectors. My book, on the plant collectors of Mexico, although incomplete, has over 4,200 names in that country alone.

Of course, there are animal collectors too, but my guess is that their numbers are lower. This probably is so because plants are the main source, directly or indirectly, of food eaten by man and other animals. In addition, most of our fossil fuels (coal and oil), dyes, perfumes, lumber, and clothing come from plants. One must not forget the millions of garden club members who find gardening and other horticultural pursuits a source of pleasure and relaxation.

So fascinating has collecting been that many books have been written about the subject. Some readers are interested in the discovery of new botanical or horticultural subjects, while others marvel at the trials and tribulations of the early scientists. They had no planes, modern ships, adequate maps, or really effective medicines to help them. My own sorties into Mexico in the 1930's presented no great dangers, although I was in very rugged areas where thieves, and in one case a murderer, were known to be. Others, like Dr. Moldenke, were not so fortunate, having been shot at by border guards on one occasion and under the stare of an escaped murderer in the 10,000 islands of western Florida. The list of books about collectors is much too long to repeat here, but Alice M. Coats' book entitled "The Plant Hunters" is one of my favorites.

Certainly, now is the time to quote from an article by Dr. Harold<sup>1</sup> Moldenke, well-known American botanist, as published in Plant Life in 1946.

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\* Professor Emeritus, Department of Botany and Plant Pathology, Michigan State University, East Lansing, Michigan 48824.

<sup>1</sup> Used by permission of Dr. Moldenke and the American Plant Life Society.



"No discussion--would be complete without some mention of the wonderful work done by botanical collectors all over the world, often under the most trying and hazardous conditions of terrain, climate and hostile natives. Some of these collectors have endured the most unspeakable privations--several suffered shipwreck, some had all their collections confiscated or destroyed, at least one was held captive in a foreign land for many years, many contracted all manner of diseases which wracked their bodies with pain, one was captured by headhunters, another, in a fever delirium, was placed in an open grave in the Bolivian jungle while his guides waited for him to die, one was eaten by a crocodile while crossing the White Nile, several others were murdered and all these sacrifices were made by men who were collecting plants for the advancement of scientific knowledge and for the benefit of those of us who stay at home."

David Nelson was a collector and gardener for Captain Bligh on the ill-fated voyage of the "Bounty" and, with Bligh, was set adrift after the mutiny. The story of the incredible voyage of those in the lifeboat and the fate of Nelson are recounted in great detail in Kenneth Lemmon's book, named "The Golden Age of Plant Hunters", certainly one of the most hair-raising stories of all time. Then there was David Douglas, who, while botanizing in Hawaii, accidentally fell into a cattle trap with a live bull in it, and was promptly gored to death. Pierre Nicholas le Cheron d'Incarville died in 1757 of disease contracted in China. In 1915, Charles Frederick Ball was shot to death at Sulva Bay, Gallipoli, and the list goes on. Fortunately, many recovered from diseases--so collecting is not entirely a sad story.

As Dr. Moldenke indicated, let us always revere all those who have suffered pain, other misfortune, and even death to bring the beauties of the plant world in from the far corners of the earth for our everlasting enjoyment.



## AN ECOLOGIST JOINS THE CENTER

The newest member of the faculty at the Center for Urban Horticulture is Dr. Deane Wang. He has degrees from Harvard, Cornell and Yale and comes to us from a research position at the Yale School of Forestry and Environmental Studies.

His past research interests have been diverse, including studies on the effects of natural and man-made fire on pitch-pine oak forests in New Jersey, comparing nutrient requirements of fast-growing tropical trees, and detailing the effects of air pollution on the growth and health of trees.

A recently completed study on an urban natural area in the heart of New York City sparked his interest in urban ecology, and he looks forward to applying ecological concepts to the understanding and management of urban vegetation in the Seattle area. He sees the fields of plant community ecology, ecosystem analysis and landscape ecology as important contributors to the use of plants in enhancing urban environments.

Deane brings with him his wife, Becky and two children, Carrie and Diane--all eager to explore the special natural and cultural features of the Northwest.



## THE CONSERVATORY AT VOLUNTEER PARK

Jeanette Michel, Seattle, Washington

Rising like a white wedding cake at the end of the main road in Volunteer Park, the Conservatory glistens in the green surroundings of Capital Hill. The original building was built in 1912 on the site of some early greenhouses in the original Olmsted plans for Volunteer Park. It was designed and manufactured by Hitchings & Company of New York for \$5,000.00, and was erected by members of the Park Department staff. It was modeled after the Glass Palace in London but, of course, is on a much smaller scale. Starting in 1978, and over a period of the seven following years, the entire building has been rebuilt, urged on by a group of interested citizens (later to become the Friends of the Conservatory).

Prior to this time, the Conservatory had badly deteriorated. Rotting wood doors and window frames, and a rusting iron skeleton showed throughout the interior. Since Volunteer Park had been declared a National monument, the Conservatory, by symbiosis, had to be rebuilt using the same materials as in 1912. This required research and a great deal of effort in the making of new molds, and the milling of new woods to replace the obsolete metal fittings and the unobtainable cypress used in the original framing. Needless to say, the costs of rebuilding as it had been originally constructed had escalated considerably. However, the Seattle Department of Parks and Recreation found the necessary monies and, in 1980, the first renovation was completed, that of the Palm House, the central portion of the Conservatory. This was followed by the rebuilding of the east wing in 1982, and the west wing in 1985. The building as it stands today is a result of those efforts.

The redesigned interior of the Conservatory delights visitors with a large selection of blooming orchids immediately to the left and right as one enters the main building. The original collection was given to the Conservatory by Mrs. J. W. Clise, Sr., and formed the core of the approximately 1,300 orchids now in the Conservatory's collection. As one enters the east wing, colorful displays of sub-tropical flowers, seasonally changed, greet the eye. In the far eastern section, the cactus and succulent collection is on exhibit, contributed largely through the efforts of the Puget Sound Cactus and Succulent Society. In the west wing, the last area to be rebuilt, there are collections of ferns and cycads, as well as the rebuilt goldfish pond with its miniature waterfalls. A trellis for the display of tropical vines divides this area from the bromeliad exhibit, a collection of exotic plants, the blooms strangely different and varying with the season.

Covering an area of 3.4 acres, the Conservatory complex is still in a changing condition. With the passing of the Seattle 1-2-3 bond issue in 1985, the supporting greenhouses are to be rebuilt in 1987. Under the terms of the bond issue, the greenhouses and cold frames used to raise the many annuals and bulbs used throughout the park system, together with the Park Department's crew headquarters, will be moved from Volunteer Park to the Jefferson Park area. Newly constructed greenhouses at the Conservatory will be used for the propagating and storing of plant material displayed in the Conservatory itself. This will give the Conservatory more greenhouse space to enlarge its



present plant collections, and to expand into new categories. The largest bonus of all will be that there will now be room for the future expansion of the Conservatory itself.

The support group of the Friends of the Conservatory was formed as a tax-free organization and, as such, is able to funnel contributions given in the support of the Conservatory. These have varied from Richard Spalding's "Homage in Green", a glass canopy over the front entry, given by Safeco, to plants and benches, as well as open-ended gifts of money. Regular programs sponsored by the Friends of the Conservatory, given on the second Sunday of each month, allow various plant organizations to display their specialties, and publicize their membership efforts. Plant sales are held annually in September of each year, with the proceeds going toward the purchase of additional rare plants for display in the Conservatory. At Christmas time, poinsettias from excess stock are distributed to nursing and convalescent homes in the area. In addition, FOC has joined the International Union for Conservation of Nature and Natural Resources, operating out of Kew Gardens, which is an endangered plant organization. Our participation will be more active with the space made available within the new construction. Membership is, of course, open to all interested persons and organizations.

In 1987, the Volunteer Park Conservatory will celebrate its 75th anniversary, and special events honoring Seattle's corner of tropicana are now in the planning stages and promise to add excitement to the year. Visiting hours are from 10-4 every day of the week, and if you have not seen this little known corner of Seattle, we invite you to visit it soon for a very special treat.

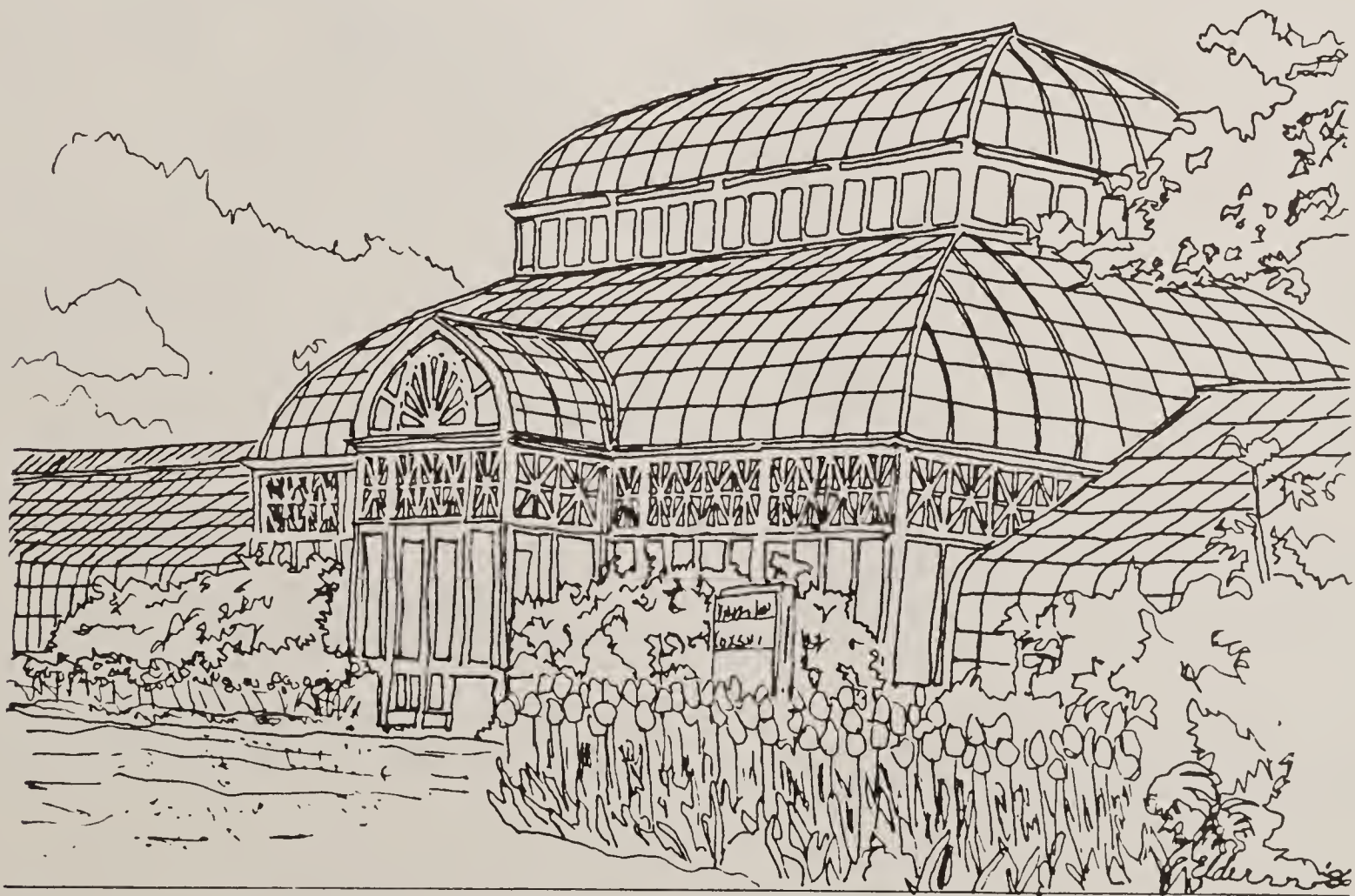


FIGURE 2. The Conservatory at Volunteer Park

## AUSTRALIAN EUCRYPHIAS

Ken Gillanders, Kingston, Tasmania, Australia

The genus *Eucryphia* is comprised of five species. Two are from Chile - *E. cordifolia* and *E. glutinosa*. The remaining three are Australian. *E. moorei* is confined to Victoria and New South Wales, while *E. lucida* and *E. milliganii* are endemic to Tasmania. All make ideal garden plants with their beautiful white flowers and attractive foliage.

*Eucryphia moorei* forms a large shrub or small tree in its natural habitat, which is in elevated higher rainfall areas. The flowers are 2.5 cm - 3 cm in diameter, and the pinnate foliage is a dark green with a slight white tomentose on the reverse.

*E. milliganii* is generally found in the south and west of Tasmania at higher altitudes than *E. lucida*, and often extending beyond the tree line and becoming a flattened, gnarled mat, only 30 cm high, on mountain tops. At lower elevations, it grows up to 4 m and possibly hybridizes with *E. lucida*, as intermediates occur where populations meet.

*E. milliganii* has small leaves about 1 cm long, but plants in elevated, exposed areas have leaves no longer than 5 mm. The four petaled flowers vary from 1 - 1.5 cm in diameter.

*E. lucida* has a wide distribution, occurring from sea level up to 900 m in the southeast, south and west of Tasmania. The common local name is leatherwood, and although trees attain a large size, up to 30 m, with trunks up to 90 cm in diameter, the timber is not used commercially. A small amount is used in the craft industry for wood turning and souvenirs. The flowers, which have a pleasant fragrance, also produce large amounts of nectar and apiarists converge on leatherwood areas in the summer months, which is the main flowering time. The foliage of *E. lucida* is about 3 cm long, deep green, with the reverse glaucous. The flowers are up to 3 cm in diameter, with a cluster of reddish tipped stamens in the center. The vegetative shoots each have a small blob of a yellowish, waxy substance on them. The early bushmen in Tasmania used to gather this and have some in their tobacco tin to use as an ointment for cuts and sores. In cultivation, *E. lucida* makes an upright plant, flowering over a much longer period than in the wild, and prefers a cool aspect and ample moisture.

A beautiful hybrid between *E. lucida* and the South American species *E. glutinosa* has very large flowers, up to 5 cm in diameter, and trifoliate foliage. Strong, vigorous growth and a bushy habit make *E.x intermedia* an excellent garden plant. It originated in Rostrevor, Ireland about 1930.

A form of *E. lucida* with variegated foliage has been found in the wild and named *E.l.* 'Leatherwood Cream'. The margins of the leaves have a thin cream variegation on the edge.



Recently, a pink flowered plant of *E. lucida* was discovered in a remote area of northwest Tasmania. This plant has now been propagated and given the name *E.l.* "Pink Cloud". The 2.5 cm flowers are a soft pink with a slight crimson stain in the base of the flower.

*E. moorei* is rather difficult to propagate from cuttings, but *E. lucida* and *E. milliganii* strike well in a sand or peat and sand mix from cuttings of the current season's growth taken in late summer. All will raise quite easily from seed, which germinates readily.



FIGURE 3. *Eucryphia lucida*, natural size. Ken Gillanders

## TOP PLANTS TO SEE THIS AUTUMN

Kathy Mendelson, Kirkland, Washington

Autumn sneaks in long before it's expected at the Carl S. English, Jr. Gardens. Even while the annuals are at their prime in late summer, you can find a few autumn leaves touched with red. From September to November, fall color works through the deciduous plant material, touching first one specimen, then another. When fall color peaks in mid-October, the subtle greens of summer are transformed into a rich mix of gold, copper, and bronze, dotted with blazing red and vibrant orange. As the brightly colored leaves fall, they are left on the ground as long as possible. The wind pushes the crisp leaves into loose piles, perfect for shuffling through, tossing in the air, or collecting.

Fall color in these gardens is often unexpected. For the best fall color, you need crisp nights and bright, sunny days. At the locks, the nights are mild, and the days are often gray. Yet, fall color is bright year after year. Why? Carl S. English, Jr., the man who created the gardens, carefully selected plant material to insure a long season of excellent fall color.

This season, the gardens offer more than colorful leaves. Fruits and berries ripen in the fall, and flowers appear on a few shrubs and perennials. For visitors, there is much to see, including these top plants.

In these gardens, the sour gum (*Nyssa sylvatica*) is the harbinger of autumn. Even before Labor Day, streaks of red appear on this tree's leaves. First touching only the backs of the sour gum's leaves, autumn color will gradually transform the tree's crown. By late September, the colorful leaves will start to fall. The *N. sylvatica*, a native of moist ground in the southeast United States, grows in a damp area of the garden affectionately called the swamp -- Bed 213.

Other hardwoods in the "swamp" add more color as the season progresses. Most of these deciduous trees are familiar. They shade homes and streets throughout the region. Here in the gardens, they combine in an attractive grove that reveals the changing seasons. Look for orange and gold color on the tulip tree (*Liriodendron tulipifera*) at the south end of the bed. Next to it, the sweet gum (*Liquidambar styraciflua*) blazes deep red in October. At the north end, a common horse chestnut (*Aesculus hippocastanum*) litters the ground, first with its seeds, later with golden leaves. On the west side, a deciduous conifer, the bald cypress (*Taxodium distichum*), will shed its feathery needles before autumn is over.

With so much deciduous plant material, picking out the best fall color might seem difficult. It isn't. Two Japanese maples claim the honors. They are bright enough to draw visitors from Commodore Park - a city park that is one-eighth mile away on the other side of the ship canal. Planted in the rock garden (Bed 120) during the 1930's, these two trees are grand any time. In fall, their colors are outstanding. On the gently cascading *Acer palmatum autropurpeum dissectum*, the maroon leaves fade to chartreuse, then color to brilliant orange. Right next door, *Acer palmatum*, 'Autumn Glory', lives up to its name by turning clear red.



Like the hardwoods, the deciduous conifers drop their foliage in autumn. In these gardens, only one, the golden larch (*Pseudolarix kaempferi*) has fine autumn color. In summer, it is medium green. By October, the green fades away, leaving a soft gold, the color of sunlight. In the gardens, the *P. kaempferi* is a small tree, perhaps 15 feet tall. Find it in Bed 16.

With gentle colors and handsome form, flowers add yet more interest to the gardens in autumn. While most of the gardens' camellia collection will wait until next February to bloom, one species, *Camellia sasanqua*, flowers from early October until the coldest weather arrives. Look for its bright pink flowers in Bed 329.

In several locations throughout the gardens, autumn crocus (*Colchicum autumnale*) sends up flowers in shades of pink and white. Like its common name suggests, the flowers resemble the familiar spring crocus. Unlike true crocus, the flowers of autumn species shoot out of the ground without any foliage to accompany them. The leaves, which emerged in spring and matured in summer, wither away before the flowers appear.

Like flowers, fruits and berries add color and interest to the gardens. Scattered in the borders, firethorn and cottoneaster show off red and red-orange berries that will last until the birds take them. A hawthorn (*Crataegus* sp.) in Bed 24 has fruits that ripen just as fall color peaks. The striking combination of large, red fruit held among golden leaves lingers briefly in early October.

The Carl S. English, Jr. Gardens are located at the Hiram M. Chittenden Locks, 3015 Northwest 54th Street, Seattle. The gardens are open every day from 7 a.m. to 9 p.m. Bed numbers used in this article refer to a garden map available free from the Locks' Visitor Center (hours: 11 a.m. - 5 p.m., Thursday through Monday. Closed Tuesday and Wednesday.)



Reprinted from:  
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Shrubs, U.S. Dept. of  
Agriculture, Forest  
Service; Agriculture  
Handbook No. 410;  
Leslie A. Viereck and  
Elbert L. Little, Jr.  
1972.

FIGURE 4. Sprouting willow (*Salix stolonifera*), natural size. Male catkins at top; female catkin at lower left; seed capsules at lower right.

BOOK REVIEW: HARDY GERANIUMS, Peter F. Yeo, Timber Press, Portland, Oregon, 1985, 256 pages, 44 color illustrations, 100 black and white, \$32.95.

HARDY GERANIUMS, by Peter Yeo, is one of those plant books that shows up too rarely. Peter is Taxonomist at the University Botanic Garden, Cambridge, England -- but unlike what often happens with scientific specialists, he has not become linked with a single specialty genus nor even kingdom (he is also noted for his work with insects). And, he works not only with the taxonomy of wild material, but actually has specialized in garden cultivars. The new text on Geranium is a welcome addition to shelves containing Iris by Dykes, Meconopsis by G. Taylor, Carnations and Pinks by Allwood, and Violets by V. B. Baird.

The text is broken into sections dealing with history and habit, classification and nomenclature, structure and function, chromosome numbers and identification, and, the bulk, the cultivated geraniums. Information ranges widely, including such discussions as rootstocks:

European examples of species with farcreeping rhizomes or stolons are *G. macrorrhizum* and *G. dalmaticum*. These tend to grow on cliffs, and their rhizomes presumably help them to spread along crevices and into cracks. Some of the Chinese high mountain species (*G. stapfianum*, *G. pylzowianum*, *G. orientalitibeticum*) have slender rhizomes which seem to be related to growing in turf affected by frost-heaving or to scree conditions.

The text produces a certain amount of trauma -- the kind that occurs from trying to sort out the mistakes of several centuries of mixed labels, collector's errors and gardener's short memories. As an example, *Geranium clarkei* Yeo,

It was brought to my notice by Mr. Jan Stephens when, in 1968, he gave me the violet-flowered form under the name *G. bergianum* and the white as *G. rectum*, under which names they had been growing at Kew. I sought specimens from Kashmir (two of them actually labelled *G. rectum*). Because of their obvious relationship with 16. *G. pratense* they were, at the Wisley Trial, 1973-6, treated as cultivars of that species, and named respectively 'Kashmir Purple' and 'Kashmir White'. (*G. x bergianum* Lundstrom is 15 *G. collinum* x 41. *G. dahuricum*).

The mind boggles, but at least there is a place to begin in the sorting.

The multiple access key employed to provide characteristics of named species is a new concept to me, but seems workable as presented. There is also a traditional dichotomous key. Leaf silhouettes are a practical method of illustration for the genus and the color plates are exceptional. Much of the material covered in the book is available in the Pacific Northwest or through the Hardy Plant Society of Great Britain's seed exchange.

Dennis Thompson



BOOK REVIEW: COLOUR IN YOUR GARDEN, Penelope Hobhouse, Collins, London, 1985, \$15.00.

The author places colour into six subdivisions. This pattern, together with superb colour photos, makes up about 50 percent of the book, a dazzling tour of text and photos that leaves the subject better covered than it has been in any recent books. Added to the six chapters on individual colours is a seventh one on foliage and bark. Two additional chapters, on Design for Colour and The Nature of Colour, complete the book.

Photographs in this book are superb (the book has been printed in Italy) and add immensely to its usefulness. The section on "The Nature of Colour" contains a more readily understandable discussion of the ways in which colour can be used than I have read in other accounts. But the highest value of this book is still its chapters on colour, which are superb. There is so very much here to digest, both as to really fine photos, and as to useful descriptions of an outstandingly long listing of plants.

Some examples:

*Phlomis*. The *phlomis* best suited to the pink-and-pastel coloured scheme is *P. italica*, which has silvery grey leaves and very pale pink flowers. It is a little tender, so give it a prime site (of which it is worthy), sheltered from severe winds, and make certain the roots do not stand in waterlogged soil in winter. Prune hard in summer to make a shapely bush. MEDIUM EVERGREEN SHRUB, FULL SUN, ZONES 7-9.

*Dierama pulcherrimum* has a very elegant habit when in flower, arching stems fluttering in the wind with silvery calyces opening to hanging bells of pale to deep rose. The stems are grassy and evergreen, a bit untidy. Grow these plants to hang over water, the constant movement reflected in the surface. A few plants will give plenty of self-sown seedlings. They seem to thrive in any soil, but do not like to be waterlogged in winter. EVERGREEN PERENNIAL, 1.8 M (5 ft.). FULL SUN. ZONES 8-10.

*Saponaria officinalis*, bouncing Bet, the leaves of which can be distilled for making soap (still used today for washing old fabrics) is very invasive, but if space can be found where running roots are contained, plant it or its charming double form, *S. o.* "Rosa-plena". Grow it in the herb or kitchen garden where its flowers are welcome when many aromatic-foliaged plants have become unsightly by the end of summer. DECIDUOUS PERENNIAL, 60-90 cm. (24-36 in.) FULL SUN, ZONES 7-9.

This is a very fine book, one of the best new ones I've encountered for quite some time.

Marvin Black

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BOOK REVIEW: FERNS AND ALLIED PLANTS, WITH SPECIAL REFERENCE TO TROPICAL AMERICA, by Rolla M. Tryon and Alice F. Tryon; Springer-Verlag, N.Y. 1982. 857 pages. \$148.00.

Consider this review an addendum to last quarter's special fern issue of Horticulture Northwest. The book I discussed here--Ferns and Allied Plants, with Special Reference to Tropical America, by Rolla and Alice Tryon of Harvard--is aimed primarily at systematists and is the latest authoritative genus-level treatment of the ferns as a whole. As such, it performs very well, and there is little need to review it in that context. Instead, I wish to consider how the book can benefit a serious horticultural fern aficionado.

Ferns are especially beset with problems of generic and familial delimitation. More than any other reference of which I am aware, this book provides a well organized, reasonable taxonomic framework. It is for this reason I use it as the ultimate authority and sourcebook for the Hyde Herbarium at the Center for Urban Horticulture (a copy resides in the Miller Library, C.U.H.). If you care *Grammitis* is placed in *Grammitidaceae* or in *Polypodiaceae* (tribe *Grammitideae*), and why, you should peruse carefully this treatment.

As the full title states, American genera are the ones treated in full, with descriptions and paragraphs on systematics (and infrageneric taxonomy where appropriate), ecology, geography, spores, and cytology. Fern enthusiasts will find this interesting for its own sake. Points of natural ecology should suggest to us artificial inhabitants in which members of the genera will best thrive. Follow-up of the cited taxonomic literature can reveal as yet untried taxa and potentially interesting geographic source areas.

Ferns and Allied Plants is richly illustrated (2028 figures), with habit photographs, drawings of variable frond shapes, distribution maps, photographs of sori and venation patterns, and hundreds of stunning scanning electron micrographs of spores. At very least this provides an even greater appreciation of the morphological complexity and variation of ferns, horsetales, and clubmosses. At most, it can expand our horizons as we begin to realize the Pacific Northwest's horticultural potential and gain greater natural understanding of the plants we utilize.

Dr. Clement Hamilton  
Center for Urban Horticulture  
University of Washington

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HELP WANTED! Members, your Editor needs you! Writers, artists, proofreaders, and gardeners, share your talents and practical experiences with the rest of us. A HOW TO paragraph for inclusion in the TIDBIT section takes only a few minutes to write and is always welcome. Send your contributions to Sallie Allen or call me at 363-3189 to offer your assistance, talents, and suggestions for future articles in Horticulture Northwest. This is YOUR Horticultural Society and YOUR Journal. Let me hear from you.

Sallie Allen





# Tidbits by Ladybug



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Live and Learn: Osmicote, the slow release fertilizer, has become increasingly popular with Nurserymen and gardeners alike in the Pacific Northwest. One of our members has told us that it is a heat released and caution should be used in potting uprooted cuttings and seedlings during hot weather or a sudden cold to hot situation, as was experienced in early June (32° at night to 85° daytime high). With fragile roots so confined to pots, the heat generated under these conditions can suddenly kill off newly transplanted nursery stock for no other apparent reason.



Tasmania, Australia, August 3rd: "It took 36 hours from when we left Vancouver until we reached Tasmania. It's very cold here; we came home to snow. Two days before we had returned they had 10 inches of snow which even closed the airport at Hobart. Snow also fell in Melbourne which is almost unheard of."

Leslie and Ken Gillanders



"We do grow Arctostaphylos alpina and find it a nice ground cover. Our two plants are each around a foot square, but do not (or have not yet) flowered. They have pleasant ground-hugging leaves that turn bright red in the fall. These plants were collected in the wild and put directly into their permanent site, which is a mixture of 50-50 sand and peat. It is mulched each year with sand, peat, and leafmold. We have not, as yet, tried to propagate this plant from seed or cuttings."

Bernard Jackson  
St. John's, Newfoundland



One of the most useful books in my reference library is Woody Plants in the University of Washington Arboretum Washington Park, compiled by Brian O. Mulligan, copyright The College of Forest Resources, University of Washington, 1977, Price \$2.50 for the paperback and \$3.50 for the hardbound. It is obtainable at the Arboretum office.

Sallie Allen



Gardeners, students, and professionals in Botany and Horticulture, have you taken the opportunity to visit our marvelous Elizabeth C. Miller Library at the Center for Urban Horticulture? At present, books may not be checked out, but you are welcome to come and do your research in its pleasant, comfortable atmosphere with knowledgeable librarians to welcome and assist you. Library hours Monday - Friday 9:00 - 12:00 A.M. (closed Noon to 1:00), 1:00 - 3:00 P.M. (Summer schedule) Call 543-0639 for updated information.



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\* Lifetime members



## IMPORTANT CORRECTIONS

1. Printer's Error. The Special Fern Festival edition of Horticulture Northwest was the SUMMER issue, not Spring as printed on the cover. Please correct your copy. All extra copies distributed since were so corrected by the printer.
2. Books on Fern and Fern-allies in the Elisabeth C. Miller Library", page 47, Summer 1986, was written by Valerie Easton, Librarian, not by Laura Lipton as credited. Our sincere apologies to Valerie and our thanks for her valuable contribution to the pages of Horticulture Northwest. Editor.



## N.O.H.S. ANNUAL TREASURER'S REPORT — 1985

Balance - December 31, 1984		\$ 4,883.02
Membership	- Income	\$ 9,670.00
and Yearbook	- Expense	2,579.60
Lectures	- Income	8,707.55
	- Expense	5,082.23
Journal	- Income	228.00
	- Expense	6,079.63
Admin.	- Income	5.00
	- Expense	555.35
Hospitality	- Expense	( 125.00)
Seed Exch.	- Income	326.00
	- Expense	164.38
Note Paper	- Income	40.00
Dues	- Expense	( 260.00)
Memorials	- Income	100.00
Contributions - CUH	- Expense	(10,000.00)
Garden Tours	- Income	380.00
	- Expense	183.58
Annual Meeting	- Expense	( 165.08)
Insurance	- Expense	( 200.00)
Accounting	- Expense	( 698.00)
Fern Sale	- Income	2,911.25
	- Expense	1,591.79
Plant Sale	- Income	12,823.55
	- Expense	7,286.77
Guest Book	- Expense	( 15.13)
From Merrill-Lynch Backup Fund		5,000.00
Balance - December 31, 1985		10,087.83
Total Income for 1985		\$40,191.39
(including Backup Fund Draw)		\$34,986.54
Total Expense for 1985		
Merrill-Lynch Backup Fund		
Balance - December 31, 1984		\$70,470.75
Check to CUH		(25,572.71)
Transfer to Checking		( 5,000.00)
Transfer from Memorial Fund		1,642.22
Transfer from Lecture Fund		4,109.33
Donation to Horticultural Education Fund		( 5,000.00)
Interest		3,620.79
Balance - December 31, 1985		\$44,274.38





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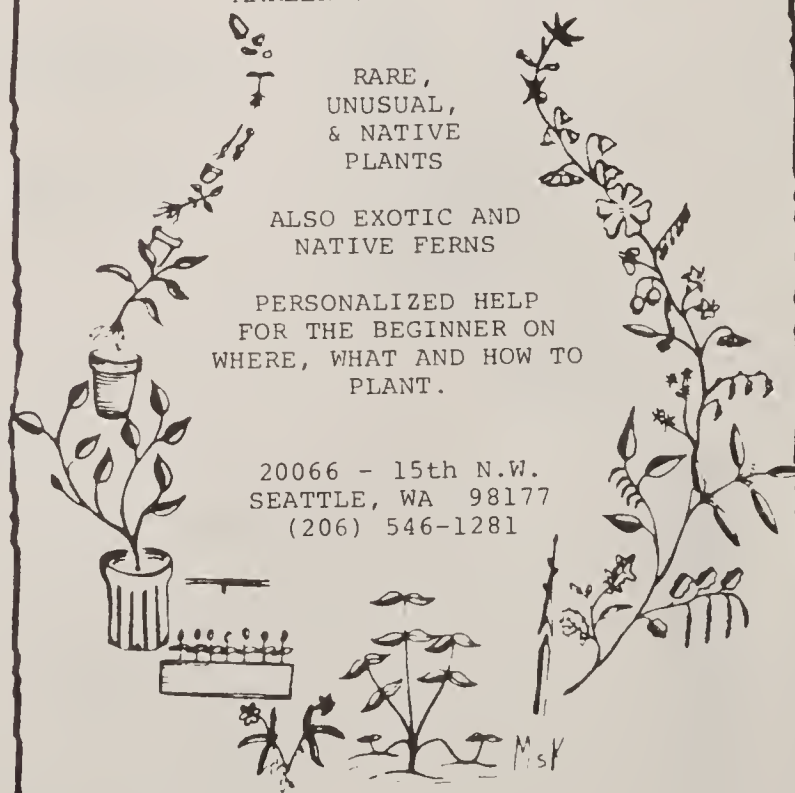
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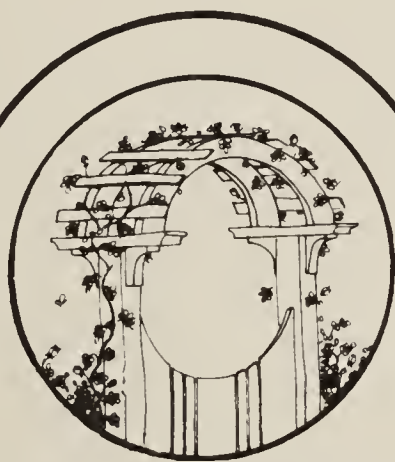
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